

REMARKS

This amendment responds to the Office Action dated March 22, 2001. Claims 1, 2, 3, 8, 24-32 and 34-37 have been amended. New claims 38-64 have been added. Claims 1-64 will be in this application upon entry of the amendment. Marked up versions of all amended claims, showing insertions and deletions, are attached as Appendix A. A clean copy of claims 1-64 is attached as Appendix B. Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested.

I. The claim objections are obviated

In paragraph 1 of the Office Action the Examiner objected to the claims under 37 C.F.R. 1.126 because the application had two sets of claims 32-34. The Office Action stated that the second set of claims 32-34 has been renumbered as claims 35-37, respectively.

Applicant wishes to express his gratitude to Examiner Tieu for the careful review of the application, which enabled the correction of the inadvertent numbering error. In this response applicant has amended the second set of claims 32-34 to reflect the correct claim numbering stated in the Office Action. In addition, the second claim originally numbered 34 (renumbered claim 37) has been amended to depend from renumbered claim 36. It is respectfully requested that the objection to the claims be withdrawn.

II. The rejections under 35 U.S.C. 102 should be withdrawn

In paragraphs 2 and 3 of the Office Action claims 1-10, 13-15 and 24-27 were rejected under 35 U.S.C. 102(a) as being anticipated by U.S. Pat. No. 5,195,128 to Knitl (the "Knitl patent"). Applicant respectfully traverses.

This application is directed to data logging systems and methods. Data logging systems monitor multiple communication channels to capture, index and store data transmitted on these channels, and make the stored data available for retrieval by users. (See page 1, lines 10-30, page 8, lines 24-25 of the written description.) Such systems are used, for example, to record emergency phone calls in order to enable reconstruction of the exact time of an emergency and the content of the conversation between the caller(s) and the operator, to record financial transactions conducted on the phone as a protection against fraud, and in other applications where it is important to keep a log of the content and exact timing of various communications. (See the "Background of the Invention" portion of the disclosure.)

Prior art logging systems were implemented typically as one physical unit, a logger, or as a combination of loggers, each performing all logger functions, including those of providing telephone interface to the monitored communication channels, processing the received signals and storing the processed signals for retrieval by users.

Unlike the prior art, the data logging system of the present application uses a novel architecture having physically separable functional stages. In a preferred embodiment, the system has three functional stages: a telecom stage, a recorder stage and a distribution stage. The telecom stage generally captures incoming signals, converts the captured signals into a predefined format and processes the converted signals. The recorder stage stores the processed input signals along with call information data to a large-capacity storage device, such as a hard drive. The distribution stage generally provides access to the stored information and may also serve to archive the information. Because functional stages of the system are physically separable, they can be located in different places, possibly wide distances apart (page 8, line 12 to page 9, line 13 of the disclosure). This separation can be used advantageously to make more efficient use of the user's space, to improve the reliability of the overall system at a lesser cost by backing up only functional components that are more likely to fail, and even to support previously unavailable logger applications, as described, for example, at page 4, lines 6-24, page 8, lines 13-35 and the examples starting at page 17 of the application.

Turning to the rejections, the Knitl patent does not disclose a data logging system. Knitl discloses a computer-controlled telephone communication system, a private branch exchange (PBX), having memory area for storing voice or fax messages (col. 1, line 54 to col. 2, line 8 of Knitl). PBXs are telephone switches typically located on the premises of a company, which enable calls among internal users and set up outgoing/incoming calls over the public telephone network (col. 2, lines 45-62 of Knitl; see also the description of PBX in the McGraw Hill Encyclopedia of Networking and Telecommunications, 2001). Accordingly, telephone switches are part of the communication system and enable transfer of information to/from select users. By contrast, the data logging systems subject of this application monitor information transmitted on communication channels, but are *not* part of the communication system and thus do not affect the transfer of information. For the above reasons applicant respectfully disagrees with the statement that Knitl discloses a data logging system.

In addition, the analysis presented at page 3 of the Office Action, in which the Knitl disclosure was compared to limitations of claim 1 is based on inaccurate reading of the

reference. In particular, contrary to the assertion in the Office Action, the Private Branch Exchange (PBX) cannot be a telecom stage of a data logging system at least because the PBX switch forms part of the communication system, while the telecom stage of this application monitors signals on established communication channels. In fact, the written description at page 3, lines 17-33, specifically mentions problems associated with connecting a logging system to a PBX switch, the clear inference being that a PBX switch is not part of the logging system. Accordingly, the Office Action has failed to establish that the prior art of record discloses each stage of applicant's multi-stage logging system.

Finally, even if one is to assume that Knitl discloses data logging and that there is correspondence between components of the patented system to stages of applicant's multi-stage logging system, Knitl would still fail to anticipate the subject claims, because there is no teaching or even a suggestion in the patent that different stages are physically separable and in operation can be located wide distances apart. In this regard applicant notes that neither the disclosure, nor the figures in the Knitl patent suggest that these components are physically separable, much less that they can be located wide apart. It is respectfully requested that the corresponding anticipation rejection be withdrawn.

Independent claim 27 has been amended to recite "a telecommunication device receiving input from a plurality of communication channels," and "a processor converting the received input to one or more data formats," and also "a memory for logging information about the received input, the information comprising data converted to at least one data format." As amended, the claim further recites "a communication path to a communications network" and "a server having access to the memory via the communications network for transferring logged data from one or more of said plurality of communication channels via the communications network to at least one remote user." Support for the amendment is found, for example, at page 9, line 1 to page 10, line 3.

Amended claim 27 cannot be anticipated for the reasons set forth above, and also because there is no disclosure, teaching or even suggestion in the Knitl patent of "a communication path to a communications network" and "a server having access to the memory via the communications network for transferring logged data from one or more of said plurality of communication channels via the communications network to at least one remote user."

Based on the above, it is respectfully submitted that the Knitl patent cannot anticipate the subject claims, and therefore the Section 102 rejection should be withdrawn.

III. **Claim amendments for clarity and unified terminology**

In order to more particularly point an distinctly claim the subject matter that applicant regards as his invention, applicant has amended claims 1, 2, 3, 8, 24-32 and 34 for clarity and to provide unified terminology. In particular, independent claim 1 has been amended to recite a multi-stage data logging system having a telecom stage "receiving input from a plurality of communication channels" and further that at least one recorder in the recorder stage is "logging data associated with information transmitted on at least one of said plurality of communication channels", and finally that the distribution stage provides access to "data logged in the recorder stage." Independent claim 24 has been amended to recite "first means for receiving signals from one or more communication channels" and a "second means for logging data associated with received signals." Independent claim 27 has been amended as noted above. Claim 29 has been amended to recite "a method for accessing information in at least one digital logger storing data associated with input from a plurality of communication channels," and also to replace the term "client" with the more accurate term "user." Support for the amendments is found, for example, at page 1, line 34 to page 2, line 5; page 10, lines 6 to 26. The dependent claims have been amended correspondingly to unify the terminology. In addition, dependent claim 2 has been amended to recite one or more signal processors "converting captured signals into formatted data," to clarify that the conversion does not depend on a particular data format. Dependent claim 3 has been amended to correct a typographical error and also to recite that the telecom stage comprises "at least one of: analog to digital signal converter and means for monitoring digital telephones." The amendment clarifies that the data logging system of this application is capable of supporting either analog or digital input signals, or both. Support for the amendment is found, for example, at page 10, lines 21-26. Dependent claim 8 has been amended to recite "a random access storage device for data storage" instead of the more specific term "a hard disk." Support for this amendment is found at page 13, lines 3-6. No new matter has been added. Marked up versions of all modified claims, showing insertions and deletions, are attached as Appendix A.

The amended claim language re-states the common understanding in this art that logging systems receive input from communication channels, and that the system generates and stores logs of the information transmitted on one or more monitored channels. Applicant wishes to point out that the above amendments are merely for clarity and thus are not related to the patentability of the original claims.

IV. The obviousness rejections should be withdrawn

(1) In paragraphs 4 and 5 of the Office Action the Examiner rejected claims 11-12 and 16-17 under 35 U.S.C. 103(a) as being unpatentable over the Knitl patent. Applicant respectfully traverses the rejections.

Claims 11-12 and 16-17 depend from and contain all limitations of independent claim 1, which is believed to be patentable. For the reasons set forth in Section II of this response, dependent claims 11-12 and 16-17 are also believed to be patentable.

(2) In paragraph 6 of the Office Action claims 18-23 and 28-34 were rejected under 35 U.S.C. 103(a) as being unpatentable over the Knitl patent, and further in view of U.S. Patent 4,692,819 to Steele (the "Steele patent"). According to the Office Action, Steele discloses the use of a Web server, which can be incorporated in the system of Knitl so it is no longer limited to recording of voice mail only, but "can be operated to record and reproduce of video information on the Web." It is respectfully submitted that the obviousness rejection in the Office Action is based on incorrect reading of the Steele patent.

The Steele patent is directed to a method and apparatus for controlling the position of a transported media (a web), such as a magnetic tape. As noted by the Examiner, Steele teaches a method and apparatus for controlling the position of a web of magnetic tape in connection with an apparatus for recording and reproducing of video information. (Col. 4, lines 32-57 of Steele.) Controlling the transport of a tape in a video tape recorder involves accurate control of the tape velocity and position. To this end, Steele proposes to use markers that identify locations on the tape, and to independently monitor the displacement of the tape along the path. Steele's comparison of the tape markers with the output of the independent monitor enable accurate determination of the position of the tape relative to the traversed path.

Turning to the rejection, Knitl's telecommunication system and Steele's tape control mechanisms clearly belong to different technological arts. A person of ordinary skill in either art would have had no reason to consider the combination of references at least because they do not complement each other in the manner suggested in the Office Action. Therefore the suggested combination is improper.

Assuming for the sake of argument that such combination of the two references would have been be considered, applicant respectfully submits that the Steele patent does not supplement the teaching of Knitl in any way that would affect the patentability of the subject

claims. In particular, it is not clear how combining the teachings of Knitl with the tape control apparatus and method of Steele would result in a data logging system or method. Further, applicant has been unable to find in Steele a single reference to the term "server." Similarly, while the term "web" is used throughout the patent disclosure, its meaning in the Steele patent is confined to a transported record medium, such as a video tape. The prior art of record simply does not disclose, teach or even suggest a method for accessing information in a logger, where users communicate requests for stored data over a "Web" in the sense of a communications network like the Internet. Similarly, the prior art does not even suggest employing a "Web server having access to said at least one digital logger over a communications network," as recited in independent claim 29.

Claims 18-23, 28, and 30-34 depend from claims 1, 27 and 29, respectively and are believed to be patentable for the same reasons set forth above.

Based on the foregoing, applicant submits that the subject claims would not have been obvious to a person of skill in the art in view of Knitl and Steele, either taken alone or in combination. It is respectfully requested that the rejections in paragraph 6 of the Office Action be withdrawn.

(3) In paragraph 7 of the Office Action claims 35-37 were rejected under 35 U.S.C. 103(a) as being unpatentable over the Knitl patent, and further in view of U.S. Patent 5,819,005 to Daly (the "Daly patent"). With respect to independent claim 35 the Examiner acknowledged that Knitl fails to teach backup recorders, but stated that the Daly patent discloses such feature at col. 3, lines 41-47 of the patent. With respect to independent claim 36 the Examiner acknowledged that Knitl fails to teach the feature of increasing the recording capacity of a logging system, but stated that Daly discloses this feature in the Abstract, as well as col. 1, lines 19-29 and col. 2, lines 8-30 of the patent. Applicant respectfully traverses.

The Knitl patent was discussed above. The Daly patent is assigned to the assignee of the present application and lists as a co-inventor the inventor of this application. This patent was also mentioned in the "Background of the Disclosure" of this application. Daly discloses a modular digital recording logger, the capacity of which can be increased. (Abstract, col.1, lines 19-29 and col. 2, lines 8-30.) Daly also teaches redundancy implemented using two DAT drives 26a and 26b that record information in parallel. However, contrary to the assertion

in the Office Action, Daly in combination with Knitl would not render the subject claims obvious.

Specifically, with respect to claim 35 neither Knitl nor Daly teach, disclose or suggest the steps of “detecting a malfunctioning recorder in the recorder stage,” and “automatically switching interface links from the detected malfunctioning recorder to said backup recorder to ensure uninterrupted operation of the system” and further “without disrupting the operation of the system replacing the detected malfunctioning recorder with a functioning recorder.” Knitl is not concerned with backup at all, while the Daly patent simply suggests the use of a redundant tape, so if one tape drive malfunctions, the other will continue recording. Clearly, the prior art of record taken alone or in combination provides no suggestion of any of the above steps of “detecting”, “switching” or “replacing.” It is respectfully requested that the rejection of claim 35 be withdrawn.

With reference to independent claim 36, Knitl and Daly alone or in combination do not disclose, teach, or suggest a multi-stage logging system having telecom, recorder and distribution stages, where the telecom and the recorder stages have possibly different channel capacity and are linked using network-based or four-wire-based interface. Further, although Daly discloses increasing the capacity of the system both by adding audio and main cards, and by increasing the number of logger units attached in combination, there is no teaching in this reference of increasing the capacity of the system by adding extra recorders in the recorder stage. It is respectfully requested that the rejection in paragraph 7 of the Office Action be withdrawn.

V. New claims

New claims 38-64 have been added to define additional aspects of the invention. New claims 38-54 depend from original independent claims 1, 27 and 29. In particular, claims 38-39 depend from claims 1 and 24 and find support, for example, in the disclosure at page 9, line 14 to page 10, line 3. Claims 40-51 and 54-55 depend ultimately from claim 1 and find support, for example, in the following portions of the disclosure: claim 40 -- at page 10, lines 14-26; claims 41-43 -- at page 10, line 27 to page 11, line 25; claims 44-47 -- at page 13, lines 3-6 and page 13, line 27 to page 14, line 21; claims 48-51 -- at page 16, lines 13-22; claims 54-55 -- at page 9, line 25 to page 10, line 3, and page 17, lines 4-13. Claims 52-53 depend from claim 29 and are supported, for example, at page 13, line 19 to page 14, line 21. No new matter

has been added. The subject claims are believed patentable for the reasons set forth above in the discussion of the corresponding independent claims. Independent claim 54 and dependent claims 55-62 define another aspect of the invention, which is a method for accessing information in a digital logging system. These claims are supported, for example, in the text of Example 2 starting at page 18 of the disclosure and are believed to be patentable because the prior art of record does not disclose or fairly suggest the recited claim limitations.

SUMMARY

On the basis of the above, it is respectfully submitted that this application is in condition for allowance. A prompt action by the Examiner to this effect is respectfully requested. Should the Examiner have any questions or comments concerning this submission, or any aspect of the application, he is respectfully invited to call the undersigned at the phone number listed below.

Attached to this response is a Petition for extension of time for three months accompanied by the appropriate fee. September 22, 2001 falling on a Saturday, this response is due Monday, September 24, 2001. In addition, applicant has enclosed a fee calculation sheet authorizing the payment of fees for adding extra claims. No other fee is believed due at this time. Should any fee be required, please charge such fee to Pennie & Edmonds LLP Deposit account No. 16-1150.

Respectfully submitted,

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